

CLAIMS

What is claimed is:

1. An apparatus for heating water, said apparatus comprising:

a water receptacle having a bottom wall and side walls for containing a volume of water to be heated, said bottom wall having an exterior surface, an interior surface, and an opening in said bottom wall communicating between said exterior and interior surface, said interior surface proximate said volume of water to be heated;

means for heating said volume of water contained within said water receptacle;

means for distancing said means for heating said volume of water away from said interior surface of said water receptacle; and

means for securing said heater to said exterior surface of said water receptacle so that said heater is coupled to said distancing means and to said bottom wall of said receptacle.

2. The apparatus for heating water as set forth in claim 1, wherein said means for heating said volume of water is provided with a peripheral grooved portion and wherein said means for distancing said heater means away from said interior surface comprises a collar member, said collar member positioned within said grooved portion for forming a seal between said volume of water, said heating means, and said opening in said bottom wall.

3. The apparatus of claim 2, wherein said collar member is fabricated from a silicon rubber material.

4. The apparatus of claim 3, wherein said collar member is provided with a width in the range of about 3/8 to about 1/2 of an inch.

5. The apparatus of claim 3, wherein said bottom wall of said water receptacle is fabricated from a molded polypropylene resin.

6. The apparatus of claim 1, further comprising:
a securement pin extending through an opening in said bottom wall of said water receptacle, said securement pin having first and second ends, wherein said first end of said securement pin is matingly engaged with said heater means; and
a washer adjacent said exterior surface of said water receptacle, wherein said washer retains said second end of said securement pin to said exterior surface of said bottom wall of said water receptacle so that when said securement pin is tightened, said collar member is compressed relative to said bottom wall of said water receptacle to form a liquid tight seal for containing said volume of water in said water receptacle.

7. The apparatus of claim 6, wherein said first end of said securement pin is provided with threads for threaded engagement with said means for heating said volume of water.

8. The apparatus of claim 1, wherein said means for heating said volume of water is an electric heater encased in an aluminum die cast cartridge.

9. The apparatus of claim 2, wherein said means for heating said volume of water further comprises an electric heating element having a heater enclosure shell, a heating element disposed within said heater enclosure shell and wire leads connected to said electric heating element for generating heat to be conducted to said heater enclosure shell.

10. The apparatus of claim 9, wherein said heater enclosure shell is provided with a bottom cap secured to said heater enclosure shell, said cap positioned proximate said interior surface of said bottom wall, said cap having a threaded center portion.

11. The apparatus of claim 10, wherein said heater enclosure shell further comprises a flange portion, said flange portion overlapping said cap.

12. The apparatus of claim 9, wherein the interior of said heater enclosure shell is filled with an electrically insulating thermally conductive material for facilitating transfer of heat from said electric heating element to said heater enclosure shell.

13. The apparatus of claim 1, wherein said means for heating said volume of water is provided with a first opening for receiving a thermostat for shutting off said means for heating when said thermostat reached a predetermined temperature.

14. The apparatus of claim 1 wherein said means for heating said volume of

water is provided with a second opening for receiving a thermofuse.

15. An apparatus for heating water, said apparatus comprising:

a water receptacle having a bottom wall and side walls for containing a volume of water to be heated, said bottom wall having an exterior surface, an interior surface, and an opening in said bottom wall communicating between said exterior and interior surface, said interior surface proximate said volume of water to be heated;

an electric heater for heating said volume of water contained within said water receptacle;

a collar member for spacing said electric heater in said volume of water away from said interior surface of said water receptacle;

a securement pin extending through said opening in said bottom wall of said water receptacle, said securement pin having first and second ends, wherein said first end of said securement pin is matingly engaged with said electric heater; and

a washer adjacent said exterior surface of said water receptacle, wherein said washer retains said second end of said securement pin to said exterior surface of said water receptacle so that when said securement pin is tightened, said collar member is compressed relative to said interior surface of said water receptacle to form a liquid tight seal between said water receptacle and said exterior surface of said water receptacle.

16. The apparatus of claim 15, wherein said collar member is fabricated from a silicon rubber material.

17. The apparatus of claim 15, wherein said bottom wall of said water receptacle is fabricated from a polypropylene resin.